
AMENDMENTS TO THE SPECIFICATION

Please amend the specification as shown below.

Please amend the paragraph beginning on page 1, line 11, with the following amended paragraph:

A track on a under carriage of a track-type work machine (such as a hydraulic excavator, bulldozer et cetera) conventionally comprises endlessly-coupled track links and track shoes mounted on the respective track links. The track is passed around a sprocket and idler which are supported on the vehicle frame and disposed at required intervals. Engaged with a sprocket, each track link is driven. The track is supported by track rollers and carrier rollers disposed between the sprocket and idler in the vehicle frame. The track-type work machine travels by such arrangement.

Please amend the paragraph beginning on page 7, line 11, and continuing on page 8, with the following amended paragraph:

Furthermore, it is advisable that the bushing hole part of the internal link is 1.1 to 2.0 times greater in thickness dimension than the coupler pin hole part of the external link. As the result of this arrangement, in comparison with the coupler pin hole formation part of the external link into which the coupler pin is directly fixedly press-fitted, it is possible to extend the length of bushing-to-hole interfitting as well as to enhance strength because the seal rings are housed inside for interfitting to the bushing serving also as a bearing member in the bushing hole formation part of the internal link. If the comparative ratio of the length (thickness) of the bushing hole formation part to that of the coupler pin hole formation part is not more than 1 : 1.1, the degree of stress acting on the bushing side is increased by the load acting on the bushing hole side, resulting in the drop in rigidity. On the other hand, if the

aforsaid ratio exceeds 1: 2.0, the strength of the internal link is improved; however, when assembled as a track link, the link width thereof increases excessively and the weight becomes excessive. This is unfavorable because the load, at the time when the vehicle is travelling, increases.

Please amend the paragraph beginning on page 10, line 1, with the following amended paragraph:

~~Secondary~~ Secondarily, the present invention discloses a link for a track with a rotatable bushing which is an external link for a track with a rotatable bushing for a track-type vehicle in which a track link comprises a combination of an external link and an internal link and a coupler pin hole is provided through the external link. An external link for a track with a rotatable bushing of the present invention is characterized in that an inner surface side circumferential area of the coupler pin hole of the external link is formed into a concave surface corresponding to an outer shape of a boss part formed around a bushing hole of the internal link.

Please amend the paragraph beginning on page 12, line 9, with the following amended paragraph:

The external and internal links 3, 4 are, as described above, symmetrically with the coupling direction axial line and are interlinked alternately, by the coupler pin 5 and the bushing 6 and each track link 2 of the track 1 is sequentially interconnected with the other. Since the internal and external links 3, 4 are symmetrical in shape, those situated on one side will be described hereinafter.

Please amend the paragraph beginning on page 12, line 14, and continuing on page 13, with the following amended paragraph:

Firstly, the internal link 3 has a main body part 31, as best seen in Figure 5. In the main body part 31, its inside surface 32 is formed into a flush flat surface, and the inside surface 32 is either an opposing surface to another internal link 3 (external link 4) situated on the opposite side when assembled as the track link 2 or a surface that travels along the track drive sprocket which is hereinafter called the “inside surface 32” while the opposite surface to the inside surface 32 is referred to as the “outside surface 33”. In the main body part 31, a hole 34 (hereinafter the bushing hole 34) for the bushing 6 which is externally interfitted onto the coupler pin 5 at predetermined pitches is so formed as to extend orthogonally to the inside surface 32. Additionally, an upper surface of the internal link 3 serves as a tread, and a projecting part 35a, for securing the tread 35 at link assembly time, is projectingly provided in an upper half part of the internal link 3 situated between bushing holes 34, 34 so that it projects a required dimension from the outside surface 33. Furthermore, a pillar 37 is vertically provided under the projecting part 35a in the middle of the main body part 31. Through holes 37a, 37a are provided on each side of the pillar 37, passing completely through from one side to the other. A bolt insertion hole 37b is penetratingly formed at predetermined pitches so that it extends from a lower end surface (i.e., a track shoe mount surface 38). The track shoe mount surface in a parallel relationship with a plane connecting the centers of the bushing holes 34, 34, and the tread 35 is also formed into a flat surface running parallel with the track shoe mount surface 38. Each end 31a of the main body part 31 is shaped like a circular arc with a required radius on the basis of the axial core of the bushing hole 34. The whole main body part 31 is formed symmetrically with the central longitudinal axial line when viewed from the front.

Please amend the paragraph beginning on page 13, line 20, and continuing on page 14, with the following amended paragraph:

As can be seen from Figure 4, a boss part 36 forming a part of a frustum which gently [lifts] slopes upward is provided on the side of the outside surface 33 of the bushing hole 34 in the internal link 3. The boss part 36 has an outer shape continuing smoothly to the tread 35. Therefore, in the present embodiment, the axial-wise length of the bushing hole 34 (thickness T) is about 1.5 times the axial-wise length (thickness t) of a coupler pin press-fit hole (coupler pin hole 43) in the external link 4 which will be described later.

Please amend the paragraph beginning on page 14, line 6, and continuing on page 15, with the following amended paragraph:

On the other hand, the external link 4 has a main body part 41 the contour of which is almost the same as the aforesaid internal link 3, and has coupler pin holes 43, 43 the dimension of which is the same as the pitch of the bushing holes 34, 34 of the internal link 3, and an outside surface 42 of the external link 4 is made flat. The external link 4 is so shaped as to have a boss part 44 shaped like a frustum, whereby a circumferential area of the coupler pin hole's 43 formation part gently [lifts] slopes upward. Additionally, in the inside surface 45 of the external link 4, the circumference of the coupler pin hole 43 is formed into a concave surface (i.e., a concavely curved surface 45a) corresponding to the shape of the boss part 36 of the outside surface 33 of the internal link 3. Additionally, as in the internal link 3, a projecting part 47a, for securing a tread 47 at link assembly time, is projectingly provided in an upper half part situated midway between the coupler pin holes 43, 43 so that it projects a required dimension from the inside surface 45. Furthermore, a pillar 48 is vertically provided under the projecting part 47a in the middle of the main body part 41. Through holes 48a, 48a are provided on each side of the pillar 48, passing completely through from one side to the

other in the external link 4. A bolt insertion hole 48b is penetratingly provided at predetermined pitches so that it extends from a lower side of each through hole 48a in a direction orthogonal to a lower end surface (i.e., a track shoe mount surface 49).

Please amend the paragraph beginning on page 16, line 3, and continuing on page 17, with the following amended paragraph:

Each fixed bushing 6b which is interfittingly mounted into the bushing hole 34 of the internal link 3 is so formed as to have a length dimension capable of securing, when tractional forces act thereon at the time of being assembled as the track link 2, a pressure receiving surface able to cope with the resulting load, and it is arranged such that seal rings 7, 7 are housed on both sides of the fixed bushing 6b. Therefore, as described above, the thickness T of the bushing [hole's] holes 34 formation part is made greater than the thickness t of the coupler pin hole's 43 formation part of the external link 4. In comparison with the thickness dimension t of the coupler pin [hole's] holes 43 formation part of the external link 4, the thickness dimension T of the bushing [hole's] holes 34 formation part may be set such that the internal link's 3 side (bushing hole formation part) thickness is about 1.1 times at minimum (preferably about 1.3 times) that of the external link's 4 side thickness, in which case one of the seal rings 7 is disposed on the coupler pin fixing side as conventionally. Additionally, for the purpose of further enhancing strength, the thickness dimension T of the bushing [hole's] holes 34 formation part can be increased to about two times the thickness dimension t of the coupler pin [hole's] holes 43 of the external link 4. However, if the thickness dimension T is made greater to a further extent, this increases the width dimension of the track link 2, as a result of which the width dimension of tracker rollers must be increased. The underbody size increases, which is economically inefficient. In view of this, the ratio of the thickness dimension T to the thickness dimension t, i.e., T/t , is set to 1.5 in the

present embodiment. Additionally, if the T/t ratio is set to 1.4, this produces economical advantages.

Please amend the paragraph beginning on page 17, line 11, with the following amended paragraph:

As described above, in manufacture of the internal and external links 3, 4 of the present embodiment, their outer shape is formed by mold forging. Because of the arrangement that the boss part 36 provided around the bushing hole 34, each of which becomes a substantial part in the main body part, are formed into a gently bulging-out, or protruded or raised shape, workability in the molding process becomes favorable, and the substantial parts can be formed thick without trouble. Each of the coupler pin hole 43, the bushing hole 34, and the bolt insertion holes 37b, 48b provided through the track shoe mount surfaces 38, 49 is machined.

Please amend the paragraph beginning on page 18, line 3, with the following amended paragraph:

The track 1 with the rotatable bushing of the present embodiment is constructed as follows. That is, in the internal link 3, in order to provide a structure required for supporting the bushing 6, the relevant portion (i.e., the boss part 36) is formed thick. On the other hand, in the external link 4, the concavely curved surface 45a corresponding to the shape of the boss part 36 forming the bushing hole 34 of the internal link 3 provides a structure required for mounting the coupler pin 5. Such a combination of the internal and external links 3, 4 is fastened to the track shoe 8, thereby providing a structure totally balanced in terms of the strength. Therefore, it becomes possible to rationally solve the strength problems with the prior art techniques. Besides, the arrangement that the seal rings 7 are housed together on the

side of the internal link 3 in the bushing mounting part makes it possible to [achieve improvement in the assembly] improve assembly, and, in addition, it is ensured that entrance of powder dust into the inside of the fixed bushings 6b is prevented without fail. Therefore, bearing functions are performed in smooth manner, thereby making it possible to achieve improvement in the durability.